December 25, 2000, through January 4, 2001

The Terra spacecraft is currently operating in nominal mode and all five instruments are performing well in science mode. During the month of December, the Terra team downlinked 39.1 terabits (39.1 trillion bits) of data and successfully captured 99.95 percent of those data.

Proficiency ground contacts with both the Norway and Alaska MODIS Direct Broadcast Receiving Stations were conducted in mid-December with marginal to successful results. The ground contact with Norway on Dec. 15, 2000, resulted in missed packets and a science replay was performed. On Dec. 16, there was a successful ground contact with Alaska executing a partial playback of spacecraft housekeeping data. A successful ground contact with Alaska was performed on Dec. 17 with a MODIS partial playback performed via X-band.

A MODIS calibration roll maneuver was conducted on Dec. 15.

On Dec. 20, at 02:07:56 zulu, the CERES aft instrument transitioned to "safe mode." Analysis indicated that the stored command sequence provided by the CERES team did not properly reset the azimuth A & B angles at the conclusion of the special lunar observation conducted on Dec. 20 for the purposes of instrument calibration. As a result of the improperly set azimuth angles, the instrument sun sensor detected the sun at the beginning of the next orbital sunrise and triggered the instrument to safe mode as designed.

The CERES Team and the Terra Flight Operations Team began transitioning CERES back to normal operations at approximately 2200 zulu on Dec. 20. Exiting safe mode and transitioning back to normal operations required real-time commanding, with a reconfiguration of the instrument for the resumption of normal stored command executions. The procedures to execute these functions already existed within the configured directories in the EOS Operations Center, and their use presented no issues or risk to the instrument or spacecraft.

Issues

Onboard temperatures of the ASTER shortwave infrared (SWIR sensor) are approaching Yellow Limits. An anomaly investigation Team at NASAπs Goddard Space Flight Center is working with ASTER personnel to analyze data and recommend a course of action. An anomaly team is being formed that will support the Japanese in the troubleshooting of this anomaly.

Changes to ASTER limit values on six telemetry points in the Project Database were implemented at the request of the ASTER instrument team and formally approved for promotion to operations on January 3, 2001.

Plans

The next Master Oscillator Frequency Adjust is planned for Jan. 5, 2001.

The Flight Ops Team will support the ASTER Field Campaign on Jan. 5, 2001. Also, the Team will support the MODIS Snow & Ice Validation campaign in New Hampshire on Jan. 8, and in New York on Jan. 15.
There is a MODIS Calibration Roll Maneuver scheduled for Jan. 13 from 17:17 - 17:30 zulu.
There will be a Drag Make Up Maneuver on Jan. 17 at 19:38 zulu.